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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))

Attorney Docket No. 1365-021C
First Inventor or Application Identifier Webber, et al.
Title SYSTEM FOR REAL TIME SHOPPING
Express Mail Label No. EL039913012US

APPLICATION ELEMENTS
See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO: Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

1. ☒ * Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☒ Specification [Total Pages 18]
(preferred arrangement set forth below)
 - Descriptive title of the invention
 - Cross References to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to Microfiche Appendix
 - Background of the invention
 - Brief Summary of the invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
3. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 4]
4. Oath or Declaration [Total Pages 3]
 - a. ☐ Newly executed (original or copy)
 - b. ☒ Copy from a prior application (37 C.F.R. § 1.63(d))
(for continuation/divisional with Box 17 completed)
(Note Box 5 below)
 - i. ☐ DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).
5. ☐ Incorporation By Reference (useable if Box 4b is checked)
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered to be part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

6. ☐ Microfiche Computer Program (Appendix)
7. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - a. ☐ Computer Readable Copy
 - b. ☐ Paper Copy (identical to computer copy)
 - c. ☐ Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

8. ☐ Assignment Papers (cover sheet & document(s))
9. ☐ 37 C.F.R. § 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
10. ☐ English Translation Document (if applicable)
11. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
12. ☐ Preliminary Amendment
13. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
14. ☐ * Small Entity Statement filed in prior application, (PTO/SB/09-12) ☐ Status still proper and desired
15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☐ Other:

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17. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:

☒ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: 08, 971,764
Prior application information: Examiner A. Wong Group / Art Unit: 2735

18. CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label (Insert Customer No. or Attach bar code label here) or ☒ Correspondence address below

Name Jeffrey S. Standley
Standley & Gilcrest, LLP
Address 495 Metro Place South, Suite 210
City Dublin State Ohio Zip Code 43017
Country USA Telephone (614) 792-5555 Fax (614) 792-5536

Name (Print/Type) Jeffrey S. Standley Registration No. (Attorney/Agent) 34,021
Signature [Signature] Date 6/17/99

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APPLICATION FOR UNITED STATES LETTERS PATENT

FOR

SYSTEM FOR REAL TIME SHOPPING

Inventors: John C. Webber
Gregory S. Gerard

Assignee: CompuServe Incorporated
Columbus, Ohio

Attorneys: Standley & Gilcrest
Attn.: Jeffrey S. Standley
555 Metro Place North
Suite 500
Dublin, Ohio 43017
Phone: (614) 792-5555

SYSTEM FOR REAL TIME SHOPPING

BACKGROUND AND SUMMARY OF THE INVENTION

The present invention relates generally to a system for use in on-line shopping, and more particularly, to a computer system that enables a user to have real time access to product/service information and direct product/service ordering from multiple merchants.

On-line shopping is typically conducted through a network host that maintains product/service information from a variety of merchants, takes orders from the network host's customers and forwards the orders to the respective merchant. However, this is merely one step in a multiple step process. Before this transaction may take place, several preliminary steps must be accomplished. First, each participating merchant forwards product information and pricing to the network host for posting to the network to solicit purchasers. This product information and pricing is usually transferred to the network host through conventional mail, telephone service or by sending such information to the appropriate on-line address at the network host. The network host then compiles, classifies, sorts, stores and displays the product information on-line to network host customers that request such information.

For several reasons, the product information may vary from day-to-day. The above described process may involve a significant time lag between the time that the merchant sends the product information to the network host and the time the potential consumer receives the product information. Therefore, merchants must account for such a time lag and must provide conservative estimates on the product information. Merchants must anticipate market fluctuations in pricing and availability and must hedge against such market changes. For example, a merchant may send product information to the network host regarding a specific product. Customer demand for such a product may dramatically increase and more orders for the product may be placed with the merchant through the network host than was

anticipated by the merchant. The merchant may then receive more orders for the product than the merchant can readily provide. Product orders must then be placed on back-order or remain unfilled indefinitely. The merchant is unhappy at his inability to fill the orders and receive the profits based on the orders received but unfilled. Customers are unhappy at not receiving their merchandise on a timely basis and may be forced to acquire such products elsewhere at a higher cost or they may forgo the purchase altogether.

Additional problems exist for the customer who wants to purchase a given product or service. Previously, such customers were required to "shop" one merchant at a time. A customer had to access the database of one merchant, collect information regarding the desired product or service, store the information, access another merchant's database and again collect information regarding the desired product or service. This process had to be repeated for each merchant. Thus, the process required the customer to "shop" all available merchants before deciding the merchant from whom the customer was going to purchase. This process is complicated by the fact that many customers may have vague or indefinite parameters defining the selection criteria and parameters. For instance, a customer may know that pants are required but may not be able to sufficiently narrow the criteria into styles of pants or name brands. Here, the customer would need to browse each individual merchant's wares and by that scan many undesirable pants. Additionally, as the customer successively "shops" individual merchants, the customer may learn to narrow or change the parameters for the search. The customer may then want to repeat the shopping already accomplished. The above described process is time consuming. Such time consumption can be especially important when accessing an on-line service that charges the user based on on-line time.

There is a need to provide product/service information for multiple merchants in real time to a potential customer that would otherwise not be available for weeks or months. In this age of daily market fluctuations, it is advantageous to a potential customer to be able to have accurate, real time information concerning product availability and pricing for multiple merchants. As product pricing and availability fluctuate and differ between merchants, the importance to the customer of being able to respond to those fluctuations and differences on a timely basis increases. A customer can decide in real time whether to purchase one product over another product or whether to purchase a product from one merchant over another merchant.

The present invention is designed to provide a user with real time product/service information, from a variety of merchants, in a format that is understandable and informative. The present invention is unique in that never before has there been a network system that conducts a search of multiple sources of shopping information, in substantially real time, and presents the results to the user in one organized presentation.

The present invention is a sophisticated computerized system by which various merchants may be electronically connected to a computer network such as the CompuServe® network. Value added software is provided at the network to assimilate the data collected from various and multiple merchants in real time, to place the data in an understandable format for preferably a single presentation to the user. The user receives the assimilated data from the various and multiple merchants through an electronic connection (via modems) between the user's computer and the network. A program on the user's computer can capture the formatted data supplied by the network and prepare it for display or analysis. In an alternate configuration the merchant is electronically connected to a regional host. The

regional host is equipped to receive product/service information from the merchant. The regional host is then electronically connected to the computer network.

The system of the present invention has many advantages over known product/service information management methods. First, the present invention offers a "real time" picture of available products and/or services from multiple and varied merchants. Second, the present invention allows a merchant the ability to react in "real time" to the demand. Third, the present invention offers the capability to a user of acquiring various merchants' product/service information in one understandable format that is currently not available by other methods.

These and other advantages will be apparent from the following detailed description of the invention, drawings, and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a diagrammatic view of one embodiment of the present invention;

Figure 2 is a diagrammatic view of a second embodiment of the system of the present invention;

Figure 3 is a diagrammatic view of a third embodiment of the system of the present invention;

Figure 4 is a conceptual view of the system of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT(S)

Referring now to Figure 1, there is shown a preferred embodiment of the system 10 of the present invention. Contributing merchants 12, 14, 16 (such as clothiers, gift shops, florists, etc.) are shown connected to a regional host computer 18. A preferred alternative is for the merchants 12', 14', 16' to connect directly to a computer network 22. Each merchant downloads data to the computer network or regional host at least once each business day and

more frequently as desired by the organizations and users of the present invention. Each merchant provides detailed, current information regarding products and/or services offered by the merchant. The ability of the present invention to receive data from multiple merchants and multiple regional hosts is also exemplified in Figure 1. Network 22 may be connected to any number of merchants 12', 14', 16' and regional hosts 18.

If a merchant is connected to a regional host, the regional host must send the information obtained from the various merchants to a computer network 22. Preferably, the merchants are connected directly to the computer network 22 that may then store the received data on the computer network database 20. The network 22 assimilates the various data into an understandable format that is preferably organized in such a way to enable the user to quickly find the needed information. The network computers are preferably equipped with a software program 24 designed to receive the data collected from the various merchants, put it in a usable protocol and organize it for each user so that all of the product/service information requested by a user is contained in one on-screen presentation. The software of the present invention can quickly generate a new product/service presentation as the data changes from the merchants in real time. The software also preferably accomplishes various mathematical and accounting functions to offer the user the capability of not only gathering real time product/service information from various sources but combining and computing that information so that additional information is provided, such as may prove valuable when comparison shopping.

Once the software at the network has organized and presented the data in an understandable format, the data is ready to be electronically transferred to the user's computer 26. The user may access the network via a modem on the user's computer and a modem at the network. Optionally, the user may be provided an information management interface 27

to simplify communication between the user's computer and the network. Security codes that would be assigned to each user would enable the network to identify a user before providing product/service information to the user's computer. For security reasons, the system is preferably arranged so that the user can receive information (at the user's request) but is equipped so that the user cannot alter the information by accessing merchant records. Additionally, the system is preferably equipped with the capability of enabling the user to manipulate the data at the user's computer so that it can be presented in several formats and to allow calculations to be performed with the data. The user's computer may use several known software packages 28 to assist in use and preparation of the data.

To access the product/service information the user logs on to his or her computer and connects with the network via a modem at the user's computer and a modem at the network. The user then makes a request for product/service information currently residing at the network database. This request is preferably accomplished by the user subscribing to the network's access service and using the information management interface 27. Such access services typically provide each user with the needed communication protocols and access steps to be taken to connect with the network host computer(s). The network database(s) receives updated information regularly from the various merchants in an automatic down loading that may occur in batch mode one or more times each day. Preferably, the network database(s) receives updated information in real time from the various merchants as the information is updated. Optionally, a regional host may receive such updated information and be required to send that information to the network database.

Referring now to Figure 2, a second embodiment of the present invention is shown. In this embodiment, the versatility of the present invention is exemplified by the ability of the invention to receive data from a variety of sources in a variety of connectivities. In the

complete system 40, a bookstore 42, a florist 44 and a gift shop 46, may each have a two-way communication path with a central switch 48. These two-way communication paths may be based on TCP/IP transport connectivity. A computer dealer 50 may have a two-way communication path established with the switch 48 using an SNA connectivity. A broker 52 may have a two-way communication path with switch 48 over an X.25 connectivity.

Commercially available software routines 54 may be accessed by the switch 48 for use in assimilating and presenting the product/service information obtained from all sources. The switch 48 may act as the terminal through which the data is transferred to the network host 56. The connection between the network host and the switch 48 may also be an X.25 connectivity. Data may be transferred from all of the merchants to the main switch 48 by Ethernet, a packet switch network, modem, or otherwise. Optic transmission lines or regular phone lines may be used as the physical means by which the data transfer occurs. A user's computer 58 accesses the host 56, typically by dialing a phone number for the host accomplished by the modem at the user's computer.

Referring to Figure 3, a preferred third embodiment of the present invention is shown. In this embodiment, the ability of the network host 56' to directly receive data from a variety of sources in a variety of connectivities is shown. Numerical designators correspond to those of Figure 2 but are designated here through primes. In this embodiment, the use of a central switch, as in Figure 2, is rendered unnecessary by the network host 56'. The bookstore 42', the florist 44' and the gift shop 46', may each have a two-way communication path directly to the network host 56'. Again, these two-way communication paths may be based on TCP/IP transport connectivity. A computer dealer 50' may have a two-way communication path established with the network host 56', with an SNA connectivity. A broker 52' may have a two-way communication path with network host 56' over an X.25 connectivity. In this

embodiment, the software routine 54' for use in assimilating and presenting the product/service information obtained by all sources is accessed by the network host 56'. Again, data may be transferred using any of the media described above or by other suitable methods.

Referring to both Figure 2 and 3, operation of the system with the network host 56 (56') may be understood. Software available at the host 56 enables the user to obtain all merchant product/service information that is currently available and to be able to understand it in a recognizable fashion. Raw data coming from various merchants is not advantageous to a user unless the data is presented in a recognizable and understandable format. The present invention accomplishes this objective by resident software at the host 56, which assimilates all of the data collected from the various merchants, and makes the data available to a user, on the user's computer screen, in an easy to read format. For example, a user shopping for a book may see on the user's computer screen a display showing the current product/service information on books from multiple merchants. Taken further, resident software at the network host 56 may perform other calculations designed to tailor presentation of the data for comparison shopping of books between merchants.

Figure 4 exemplifies the present invention as viewed from a user's perspective. User 60 uses his computer and modem to establish a connection with the real time shopping network 62. The network 62 has a connection established with the merchant 64. The user 60 simply uses his computer and through the network 62 is enabled to obtain product/service information from the merchant 64 in real time.

An example of the present invention in use for a given individual will help to better explain the unique aspects of the invention. In this example, the user is shopping for a new computer system. The user logs his computer onto the network host utilizing interface

management software provided by the network host. The user inputs request parameters to the interface for a search. For instance, the user may request information regarding desktop personal microcomputers that have a 486 or higher processor. The user may further define the information needed by requesting pricing, support, servicing, warranty and information regarding available accessories. Lastly, the user may request records regarding the volume of sales of the various merchants. The interface formats these search parameters and transmits the request to the network host. The network host, through network software, accesses the network database(s) that is updated in real time from the merchants and retrieves the requested information. The network host then processes the information into a usable protocol that enables the user interface management software to provide the data to the user in an appropriate presentation. The user's computer then receives the processed information from the network host and displays the information for the user in real time. Optionally, the user may request real time updates of the requested information. Then, the information on the user's computer is continuously updated as the information received from the merchants by the network host is updated. The result is that the user has access in a readily understandable format, on a single display screen, all requested information regarding desktop 486 computers in real time. This enables the user to comparison shop for the new computer.

The present invention is unique for several reasons, but primarily, it provides a one-stop service with which a user at a personal computer, may shop on-line using real time product/service information. Furthermore, in another embodiment of the present invention, data from several sources may be downloaded instantaneously to the user's computer by an indirect, yet immediate connection with a merchant via the network host and switch. In other words, a user of the present invention may choose to view batch information downloaded at

preselected intervals, or the user may access the information instantaneously from the various merchants by a series of two-way communication paths existing between the user's personal computer, a network host, the merchant, and an optional switch. Furthermore, the present invention is unique in that it defines the various data layers to match the information provider's needs, user needs, and switch needs, to enable data to be used effectively from any source in any protocol by any user.

The present invention has been described in the form of preferred embodiments, but it is to be recognized that several modifications and variations to the invention could be made and fall within the scope of the subjoined claims.

WHAT IS CLAIMED IS:

1. An electronic shopping system, comprising:

a first connection between a first merchant computer and a network host computer, said first connection for transmitting product information to said network host computer in accordance with a first type of connectivity;

a second connection between a second merchant computer and said network host computer, said second connection for transmitting product information to said network host computer in accordance with a second type of connectivity;

a database at said network host computer for storing said product information from said first merchant computer and said second merchant computer;

a first computer program at said network host computer for assimilating said product information; and

a third connection between said network host computer and a customer computer, said third connection for transmitting said assimilated product information to said customer computer and for transmitting real time updates to said assimilated product information, said real time updates obtained in accordance with said first connection and said second connection.

2. The system of claim 1, wherein said first connection and said second connection further comprises:

a connection between said first merchant computer and a regional host computer;

a connection between said second merchant computer and said regional host computer; and

a connection between said regional host computer and said network host computer, wherein said regional host computer receives said product information from said first

merchant computer and said second merchant computer and transmits said product information to said network host computer.

3. The system of claim 1, wherein said customer computer utilizes an information management interface to simplify communication between said customer computer and said network host computer.

4. The system of claim 1, further comprising a second computer program, wherein said customer computer utilizes said second computer program to further process said product information.

5. The system of claim 1 wherein said first connection comprises a switch in communication with said first merchant computer and said network host computer, said switch adapted to assimilate said product information from said first merchant computer and to transfer said product information to said network host computer.

6. The system of claim 5 wherein said first connection is a packet switch network, Ethernet, or modem connection.

7. The system of claim 1 wherein said second connection comprises a switch in communication with said second merchant computer and said network host computer, said switch adapted to assimilate said product information from said second merchant computer and to transfer said product information to said network host computer.

8. The system of claim 7 wherein said second connection is a packet switch network, Ethernet, or modem connection.

9. The system of claim 1 wherein said first type of connectivity and said second type of connectivity are selected from the group of TCP/IP, SNA, or X.25 connectivity.

10. The system of claim 1 wherein said real time updates to said assimilated product information at said customer computer are obtained in response to a customer computer request for updated product information.

11. A method for electronic shopping, comprising the steps of:

transmitting product information from a first merchant computer to a network host computer in accordance with a first type of connectivity;

transmitting product information from a second merchant computer to said network host computer in accordance with a second type of connectivity;

storing said product information from said first merchant computer and said second merchant computer in a database;

establishing a connection between a customer computer and a host computer in communication with said database, said customer computer adapted to display information received from said host computer;

receiving at said host computer a request from said customer computer for product information from said database;

assimilating product information from said database in accordance with said request from said customer computer;

transmitting from said host computer to said customer computer said assimilated product information;

displaying said assimilated product information at said customer computer; and

updating said assimilated product information at said customer computer in response to a request from said customer computer for a real-time update of said assimilated product information with product information from said first merchant computer and said second merchant computer.

12. The method of claim 11, further comprising the step of:

generating a display of assimilated product information in response to real-time changes to product information from said first merchant computer and said second merchant computer.

13. The method of claim 11, wherein said first type of connectivity and said second type of connectivity is selected from the group of TCP/IP, SNA, or X.25 connectivity.

14. The method of claim 11, wherein the step of transmitting product information from said first merchant computer comprises the steps of:

transmitting said product information from said first merchant computer to a regional host computer; and

transmitting said product information from said regional host computer to said network host computer.

15. The method of claim 11, wherein the step of transmitting product information from said second merchant computer comprises the steps of:

transmitting said product information from said second merchant computer to a regional host computer; and

transmitting said product information from said regional host computer to said network host computer.

16. The method of claim 11 wherein the step of transmitting product information from a first merchant computer to a network host computer comprises the steps of:

transmitting product information from said first merchant computer to a switch; and

transmitting said product information from said switch to said network host computer.

17. The method of claim 11 wherein the step of transmitting product information from a second merchant computer to a network host computer comprises the steps of:

transmitting product information from said second merchant computer to a switch; and
transmitting said product information from said switch to said network host computer.

18. A method for obtaining real time product information comprising the steps of:
establishing a first connection between a first merchant computer and a network host computer;
transmitting product information from said first merchant computer to said network host computer;
establishing a second connection between a second merchant computer and said network host computer;
transmitting product information from said second merchant computer to said network host computer;
storing said product information from said first merchant computer and said second merchant computer in a database;
establishing a connection between said network host computer and a customer computer;
receiving a request for product information from said customer computer;
assimilating product information in response to said request from said customer computer;
transmitting said assimilated product information to said customer computer;
displaying said assimilated product information at said customer computer; and
updating said assimilated product information at said customer computer with updated product information from said first merchant computer and said second merchant computer.

19. The method of claim 18 wherein the step of establishing said first connection and said second connection comprises the step of establishing said first connection and said second connection in accordance with connectivity selected from the group of TCP/IP, SNA, or X.25 connectivity.

20. The method of claim 18 wherein the step of establishing said first connection and said second connection comprises the step of establishing said first connection and said second connection in accordance with a packet switch network, Ethernet, or modem connection.

21. A real time shopping system comprising:

product information from a plurality of merchant computers;

a plurality of connections between said plurality of merchant computers and a host computer, said connections for uploading said product information to said host computer;

a database at said host computer for storing said product information from said plurality of merchant computers;

a computer program at said host computer for assimilating said product information;

a connection between said host computer and a customer computer, said connection for transmitting to said customer computer said assimilated product information;

updates to said assimilated product information, said updates obtained in accordance with said plurality of connections between said plurality of merchant computers and said host computer; and

a display at said customer computer for presenting said assimilated product information and said updates to said assimilated product information.

22. The system of claim 21 further comprising a regional host computer, said regional host computer adapted to facilitate said plurality of connections between said plurality of merchant computers and said host computer.

23. The system of claim 22 wherein said product information is assimilated at said regional host computer.

24. The system of claim 21 further comprising a switch, said switch adapted to facilitate said plurality of connections between said plurality of merchant computers and said host computer.

25. The system of claim 24 wherein said product information is assimilated at said switch.

26. The system of claim 21 further comprising an information management interface to simplify communication between said customer computer and said host computer.

ABSTRACT

A system is disclosed in which a user's personal computer may access a variety of information regarding products and services, through a computer network, in real time. The computer network collects product/service information from various sources, such as gift stores, clothiers, computer dealers, etc. and formats the information in a recognizable manner to enable the information to be viewed by a user at the user's personal computer. The network performs a single search from a single search command from the user.

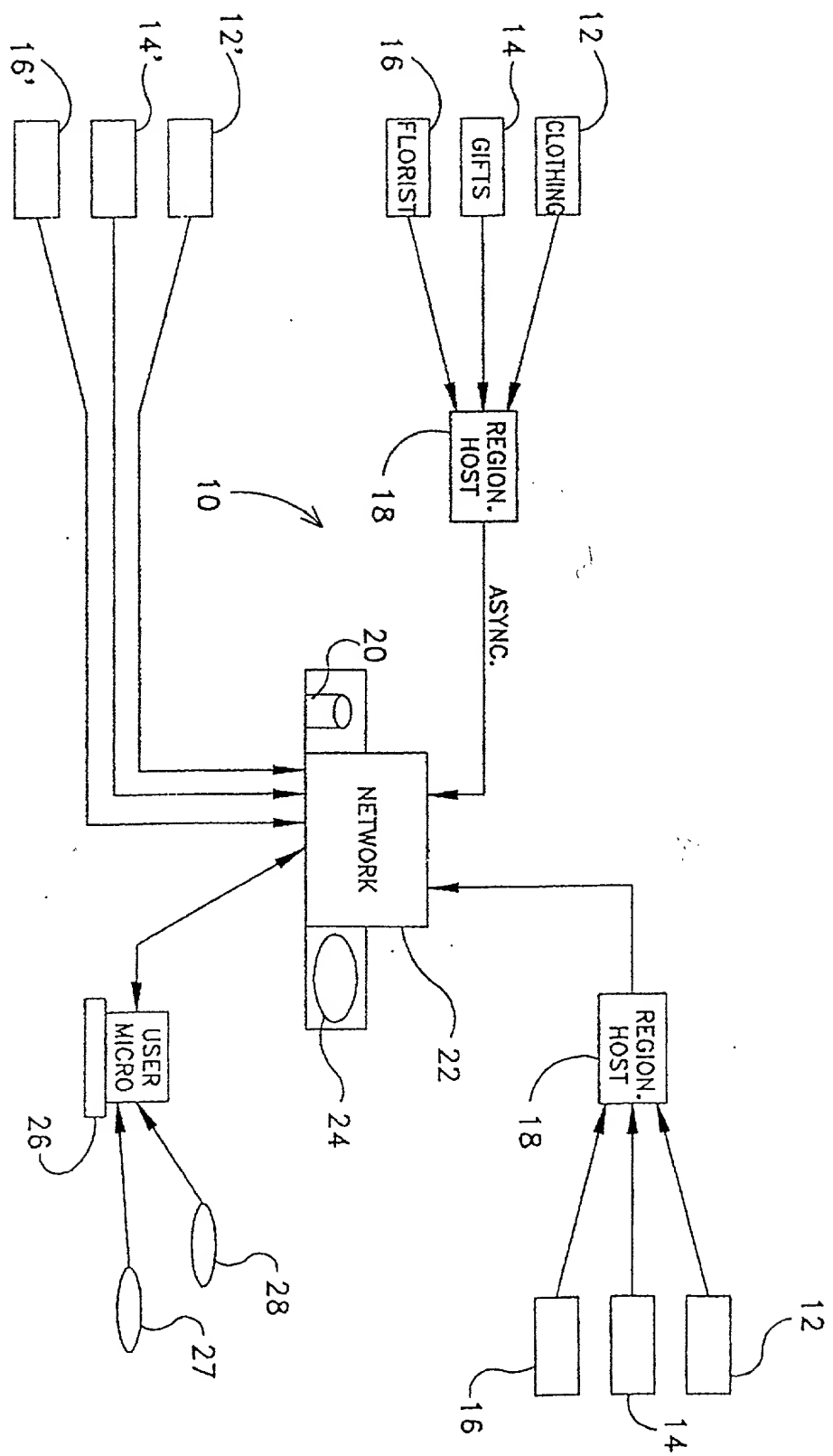


FIG. 1

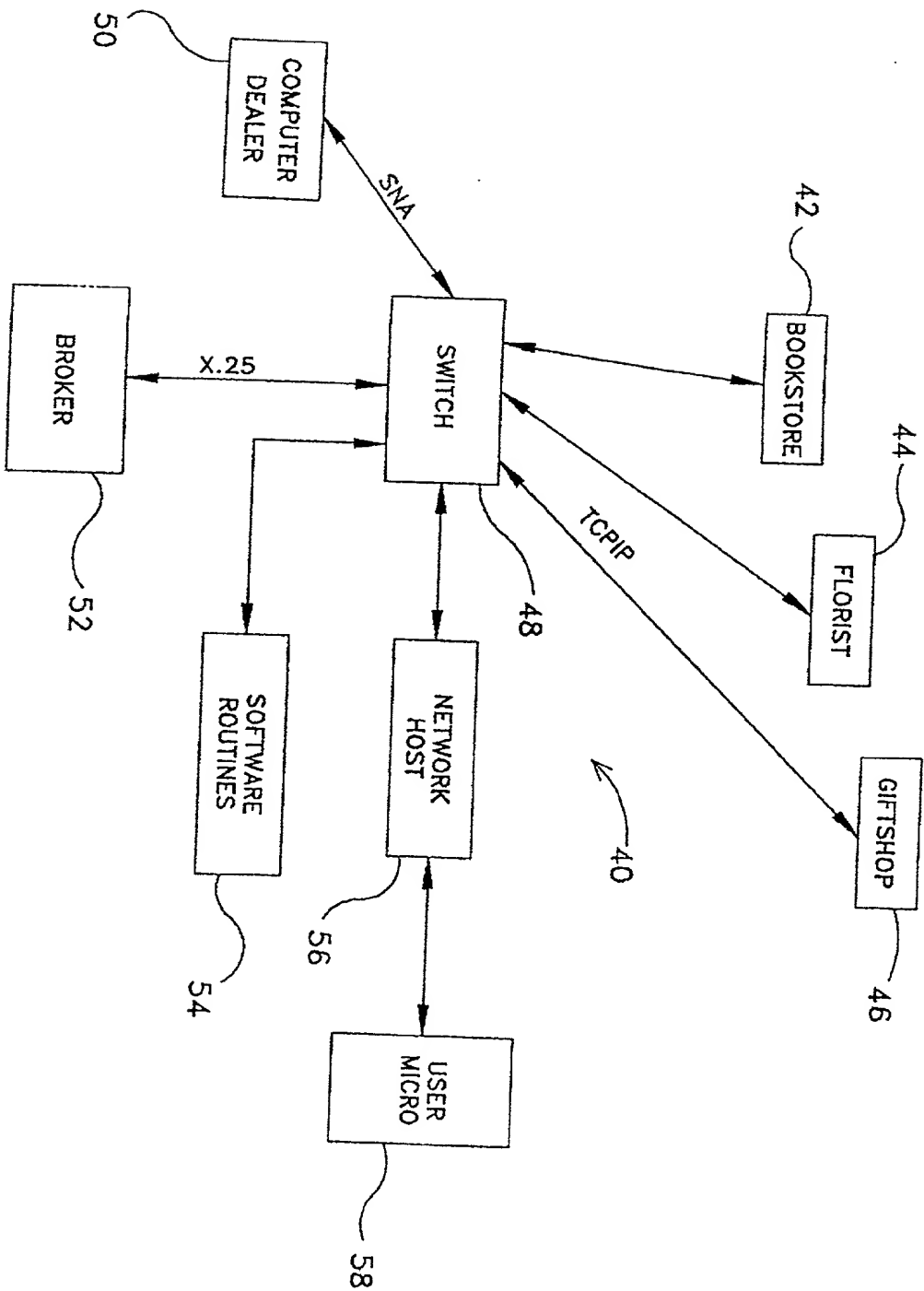


FIG. 2

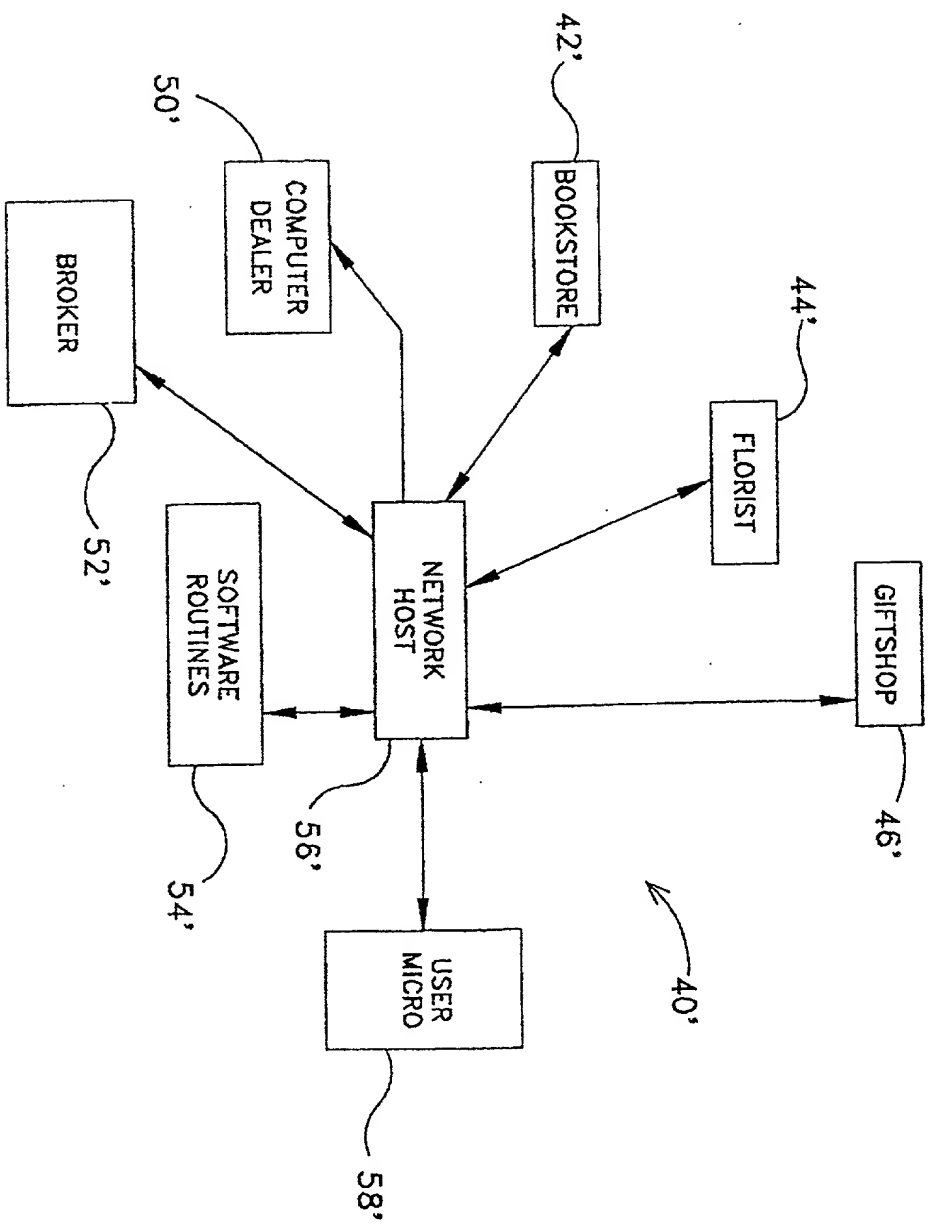


FIG. 3

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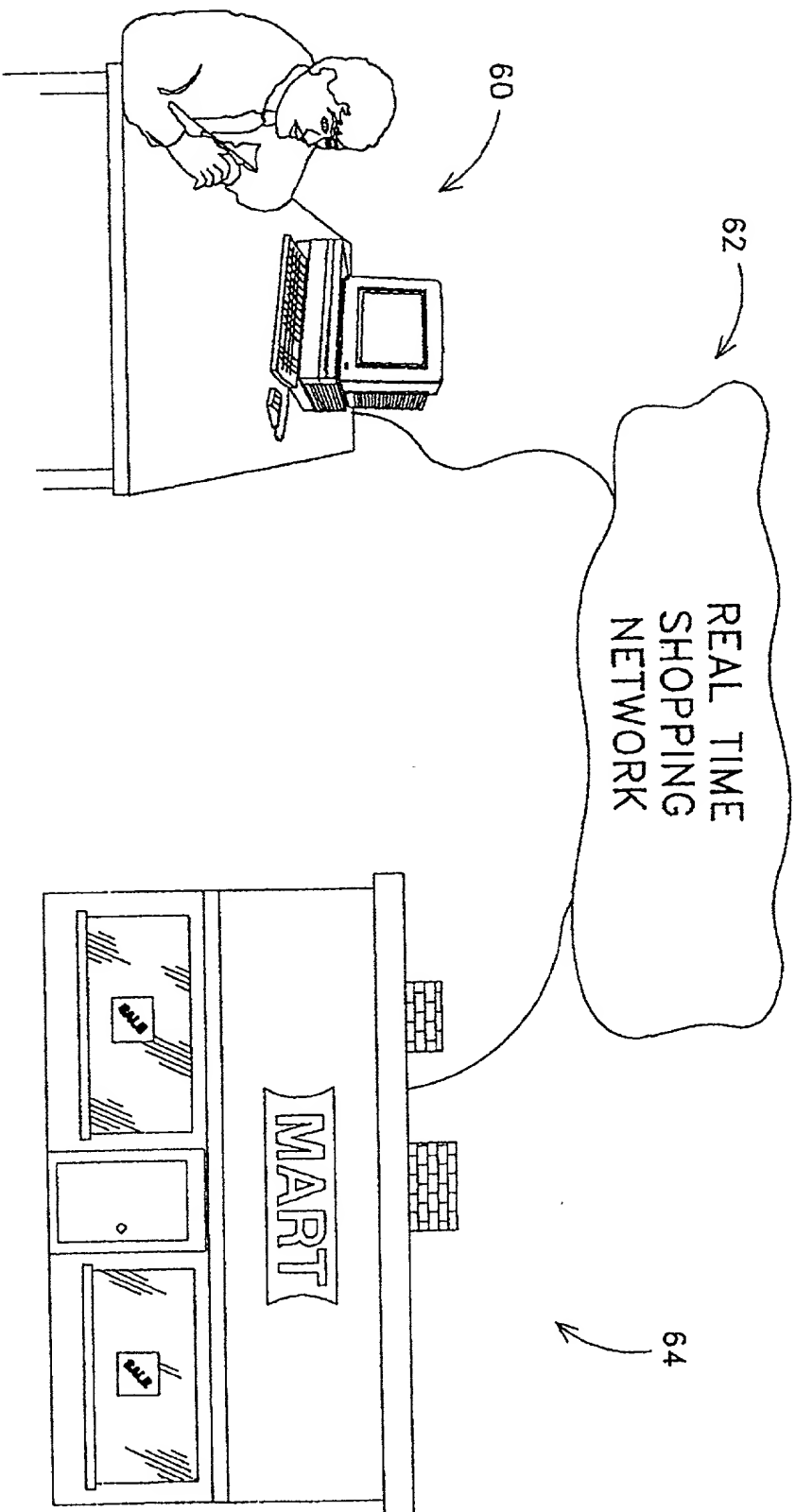


FIG. 4

	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866	1865	1864	1863	1862	1861	1860	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850	1849	1848	1847	1846	1845	1844	1843	1842	1841	1840	1839	1838	1837	1836	1835	1834	1833	1832	1831	1830	1829	1828	1827	1826	1825	1824	1823	1822	1821	1820	1819	1818	1817	1816	1815	1814	1813	1812	1811	1810	1809	1808	1807	1806	1805	1804	1803	1802	1801	1800	1799	1798	1797	1796	1795	1794	1793	1792	1791	1790	1789	1788	1787	1786	1785	1784	1783	1782	1781	1780	1779	1778	1777	1776	1775	1774	1773	1772	1771	1770	1769	1768	1767	1766	1765	1764	1763	1762	1761	1760	1759	1758	1757	1756	1755	1754	1753	1752	1751	1750	1749	1748	1747	1746	1745	1744	1743	1742	1741	1740	1739	1738	1737	1736	1735	1734	1733	1732	1731	1730	1729	1728	1727	1726	1725	1724	1723	1722	1721	1720	1719	1718	1717	1716	1715	1714	1713	1712	1711	1710	1709	1708	1707	1706	1705	1704	1703	1702	1701	1700	1699	1698	1697	1696	1695	1694	1693	1692	1691	1690	1689	1688	1687	1686	1685	1684	1683	1682	1681	1680	1679	1678	1677	1676	1675	1674	1673	1672	1671	1670	1669	1668	1667	1666	1665	1664	1663	1662	1661	1660	1659	1658	1657	1656	1655	1654	1653	1652	1651	1650	1649	1648	1647	1646	1645	1644	1643	1642	1641	1640	1639	1638	1637	1636	1635	1634	1633	1632	1631	1630	1629	1628	1627	1626	1625	1624	1623	1622	1621	1620	1619	1618	1617	1616	1615	1614	1613	1612	1611	1610	1609	1608	1607	1606	1605	1604	1603	1602	1601	1600	1599	1598	1597	1596	1595	1594	1593	1592	1591	1590	1589	1588	1587	1586	1585	1584	1583	1582	1581	1580	1579	1578	1577	1576	1575	1574	1573	1572	1571	1570	1569	1568	1567	1566	1565	1564	1563	1562	1561	1560	1559	1558	1557	1556	1555	1554	1553	1552	1551	1550	1549	1548	1547	1546	1545	1544	1543	1542	1541	1540	1539	1538	1537	1536	1535	1534	1533	1532	1531	1530	1529	1528	1
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Our residences, post office addresses and citizenship are as stated below next to our names.

(check one) [X] is attached hereto.

We hereby state that we have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

We hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

			Priority Claimed	
<u> </u> (Number)	<u> </u> (Country)	<u> </u> (Day/Month/Year Filed)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<u> </u> (Number)	<u> </u> (Country)	<u> </u> (Day/Month/Year Filed)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<u> </u> (Number)	<u> </u> (Country)	<u> </u> (Day/Month/Year Filed)	<input type="checkbox"/> Yes	<input type="checkbox"/> No

We hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, we acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulation, §1.56(a) and (b) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.)	(Filing Date)	(Status) (patented, pending abandoned)
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(Application Serial No.)	(Filing Date)	(Status) (patented, pending abandoned)
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We hereby appoint Jeffrey S. Standley, Registration No. 34,021, or Roger A. Gilcrest, Registration No. 31,954, c/o Standley & Gilcrest, 555 Metro Place North, Suite 500, Dublin, Ohio 43017, telephone (614) 792-5555, our attorneys, with full power in each of them, of substitution and revocation, to prosecute this application, to receive all correspondence, and to transact all business in the Patent and Trademark Office connected therewith. All correspondence should be sent to the attention of Jeffrey S. Standley at the address above.

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application of any patent issued thereon.

Full name of first joint inventor: John C. Webber

Inventor's signature: John C. Webber

Date: 11-8-94

Residence: Dublin, Ohio U.S.A.

Citizenship: U.S.A.

Post Office Address: 6586 Mill Ridge Circle
Dublin, OH 43017

Full name of second joint inventor: Gregory S. Gerard

Inventor's signature: Gregory S. Gerard

Date: 11-8-94

Residence: Columbus, Ohio U.S.A.

Citizenship: U.S.A.

Post Office Address: 1664 Gardenstone Drive
Columbus, OH 43235

CERTIFICATE OF MAILING BY EXPRESS MAIL

"Express Mail" number 7B233300245 us
Date of Deposit 11/10/94

I hereby certify that this correspondence was deposited with the United States Postal Service "EXPRESS MAIL" Post Office to Addressee service under 37 CFR 1.10 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231.

James B. Howard

[Signature]
(Signature of person mailing paper or fee)